



# China Civil Aviation Report

Volume 9, Issue 10

October 2007

民航报导

## Harbin Embraer delivers 1000th ERJ 145 jet to China

哈尔滨安博威在中国交付Embraer第1000架ERJ145

Reaches milestone in a decade

Shenyang Liming, GE Aviation sign accord

China to become largest airplane market

Xi'an, Antonov to develop turboprop

Largest helicopter arrives at China

China, Laos, Burma agree on RVSM implementation

China to help African nations on aviation safety

Chinese airlines to add 12 new routes

China Southern orders 55 737N-G



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#### Intersoft Electronics NV Headquarter

Lammerdries-Oost 27

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Phone: +32 (0)14/23 18 11

Fax: +32 (0)14/23 19 44

E-mail: [info@intersoft-electronics.com](mailto:info@intersoft-electronics.com)

Website: <http://www.intersoft-electronics.com>





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**COVER:** People form the "1000" number to celebrate the delivery of the 1000th aircraft of the ERJ 145 family to Grand China Express in ceremonies in Harbin City, China. (Photo courtesy of Embraer)

## From the Publisher's Desk

### Chinese airports enjoy passenger increase

The growing air transport market in China is largely benefiting airports, which have been enjoying increases in passenger and cargo volume this year.

In this issue of the China Civil Aviation Report, several Chinese airports have reported increases in passenger and cargo traffic. Chongqing Jiangbei International Airport, for instance, broke the one-million mark.

China's total traffic in August increased by 16 percent to 18.21 million passengers as tourists flocked during the summer.

Different data show that China's air transport market is poised to take a big leap in the next 20 years. In its latest market outlook, Boeing predicts that China will be the largest market for new commercial planes in the next two decades as the country acquires 3,400 planes amounting to US\$340 billion.

Also in this issue, several agreements between Chinese companies and foreign partners have been sealed that will help China become a leader in air transport manufacturing sector.

One of this is the accord between China Aviation Industry Corp. 1 (AVIC 1) and General Electric Aviation for the assembly of ARJ21 engines in China. On the other hand, Xi'an Aircraft Industry and Antonov Aeronautical Scientific/Technical Complex (ASTC) signed an agreement to develop the MA700 turboprop regional aircraft.

China is aggressively charging to continue develop its air transport market and compete with other countries. But it needs to balance its act in order to regulate the market in the next 20 years.

### 中国机场旅客不断增长

中国航空运输的成长大大地有益于机场的发展,使得今年各机场的客货运量不断增长。

在本期的《民航报导》中,多个中国机场发布了其客货运流量的增长。例如重庆江北国际机场,打破了一百万人次的纪录。

八月份中国总流量已增长了十六个百分点,夏季的游客总量已到达了1,821万人次。不同数据显示中国航空运输系统将在近二十年内不断腾飞。来自波音公司最新的市场预测显示中国将在未来的二十年内成为全新商用飞机的最大市场,全国将采购3,400架飞机,价值3千4百亿美元。

在本次期刊内,中国公司与多个国外公司达成协议,协助中国加速在航空运输制造业内的发展。

多个协议之一就是有中航一集团与美国通用电气发动机公司达成在中国联合生产发动机的协议。另一方面,西安飞机工业公司与安托诺夫航空科学-技术联合体签署了开发MA700涡轮螺旋桨飞机的协议。

中国积极地投入到航空运输市场的持续发展之中,并与其他国家竞争。但是它需要保持发展的平衡来规范将来二十年的市场成长。



Francis Chao  
Publisher  
赵嘉国  
发行人

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### Publisher

发行人  
Francis Chao  
赵嘉国

### Production Director/Writer

撰稿人  
Jonathan Hicap 乔纳森

### Chief China Correspondent

中国新闻联系人  
Lili Wang 汪莉莉

### China Staff Writer

中国新闻撰稿人  
Jing Fang 景方

### Layout and Graphic Design

版面与美工设计  
Emeng Hu 胡艳霞  
Huang Wei 黄炜

### Electronic Copy Database

电子版数据库管理  
Peng Ying Feng 彭颖锋

### Editor

编辑  
Bill Wine  
David Rodenhaver

To contact CCAR or subscribe to CCAR, please send your email to: [Info@ChinaCivilAviation.com](mailto:Info@ChinaCivilAviation.com) or visit: [www.ChinaCivilAviation.com](http://www.ChinaCivilAviation.com)

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China Civil Aviation Report  
c/o Uniworld LLC  
690 Garcia Ave, Ste. A  
Pittsburg, CA 94565  
Tel: 925-439-3799 ext 12  
Fax: 925-439-3268

北京联系电话: 86-10-8559-0830  
传真: 86-10-8559-1253



# Aviation Headlines

## ARJ21 engines to be assembled in China

通用电气拟于年底交付首台CF34-10A型发动机

China Aviation Industry Corp. 1 (AVIC 1) and General Electric Aviation signed an agreement for the assembly of engines in China for the ARJ21 regional jet, instead of having to ship it from the United States.

The agreement will allow the assembly and testing of CF34-10A engines at AVIC 1's engine factory in Shenyang. The deal

will have to be approved by the Chinese government.

Chuck Nugent, GE Aviation general manager for small commercial engines, said in July that the company was considering the assembly of the CF34-10A engines in China.

The CF34-10A will be used for the 90-seat ARJ21-700 and GE is due to deliver

its first two engines by the end of the year before ARJ21's roll-out on December 20.

Meanwhile, the 105-seat ARJ21-900 will have a longer range and will be marketed in the US. The 900 model will be manufactured for the international market and the 700 model for the Chinese market and neighboring countries.

## Shenyang Liming, GE Aviation sign accord

一航黎明与GE航空签订CF34-10A系列民用发动机生产合作框架协议

Shenyang Liming Aero Engine Group Corp. signed a cooperation agreement with GE Aviation in Shenyang for the production of CF34-10A engines. Shenyang Liming is an affiliate company of China Aviation Industry Corp. 1 (AVIC 1).

The deal is the first cooperative project between the Chinese and a foreign partner on engine manufacturing. The CF34-10A engine will be used to power the ARJ21 regional jet.

Meanwhile, Shenyang Liming also

signed a letter of intent with GE Aviation on the CF34-10A project. Shenyang Liming will undertake a parts assembly and a trial run of CF34-10A engines.

In the 1980s, Shenyang Liming started its partnership with GE on gas turbines. With a partnership that has lasted for 20 years, GE Aviation has determined that Shenyang Liming has the capability to assemble and hold a trial run of the CF34-10A engines.

Shenyang Liming will establish an

assembly line to meet the production deadline for the engines.



A CF34-10A engine for the ARJ21

## China to become largest airplane market

波音预测未来20年内中国将需要3400架新飞机

China will be the largest market for new commercial airplanes in the next 20 years, according to Boeing's latest market forecast.

Boeing said China will acquire 3,400 new planes worth US\$340 billion during the period. In addition, China will continue to lead all domestic air travel markets with a passenger-kilometer growth rate of 8.8 percent.

Following the anticipated surge in passenger traffic for the 2008 Beijing Olympic Games, the China domestic market will grow nearly fivefold by 2026 to become slightly larger than today's intra-North American market.

With the continued high rate of growth for China air travel and air cargo markets, China's fleet will nearly quadruple to 4,460 airplanes by the end of the forecast period in 2026.

Single-aisle airplanes such as the Boeing 737 will be the largest category with total new airplane deliveries reaching 2,200. Intermediate twin-aisles such as the Boeing 787 Dreamliner and 777 will see approximately 750 airplane deliveries. When combined, the single-aisle and intermediate twin-aisle market will make up 90 percent of China's total delivery dollars. About 330 regional jets and 90 airplanes of 747-and-larger size will be delivered.

With China's cargo markets leading the global industry, Chinese air carriers will add about 300 freighter airplanes by 2026. Its total fleet of freighter airplanes will more than quadruple in size.

"China domestic frequencies have increased more than sixteen-fold since 1990 while airplane sizes have remained about the same," said Randy Tinseth, Boeing Commercial Airplanes vice

president, Marketing. "The Chinese domestic market's projected average growth is almost 9%. Boeing believes the current trend of more frequencies and nonstop flights will continue to accommodate this growth through a focus on single-aisle airplanes such as the Boeing 737."

Air travel growth between China and North America as well as between China and Europe will more than double in size during the next 20 years, and the number of city pairs will more than triple. There will be an increased use of intermediate twin-aisle airplanes to and from all mainland China major cities, fueling frequency growth and new nonstop services.

Worldwide, Boeing projects investments of \$2.8 trillion for 28,600 new commercial airplanes to be delivered during the next 20 years.



## Xi'an, Antonov to develop turboprop

中国一航与安东诺夫签署民机会谈纪要

Xi'an Aircraft Industry, an affiliate of China Aviation Industry Corp. 1 (AVIC 1), and Antonov Aeronautical Scientific/Technical Complex (ASTC) signed a cooperation agreement on August 25 to develop the MA700 turboprop regional aircraft.

The signing coincided with the visit of the Chinese delegation led by Li Yuhai, AVIC 1 general manager, to Antonov.

The group met with Dmytro Kiva, general designer of Antonov ASTC and vice general designer. The delegation visited aircraft research sites such as the Antonov Strength Laboratory, test flight and adjustment base.

Li, who represented General Manager Lin Zuoming of AVIC 1, expressed cooperation with Antonov in developing civil aircraft.

Xi'an and Antonov will hold talks and sign the official agreement for the MA700 by the end of October.

## China maintains 8.7-M safe flight hours

中国民航创造连续安全飞行870万小时新纪录

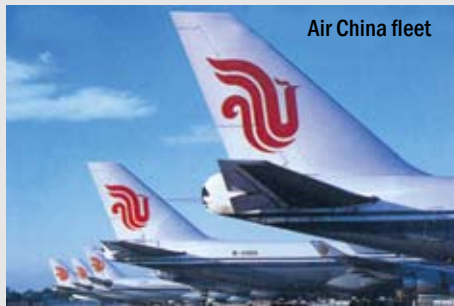
For 33 months from 2004 to 2007, Chinese civil aviation maintained safe flights totaling 8.7 million hours.

The total covers the period from November 22, 2004 to September 9, 2007, according to the Civil Aviation Administration of China. Average aircraft movements reached 12,000.

Under the 10th Five-Year Plan, China's civil aviation emphasized safety management and enhanced a safe production responsibility system.

The flight accident rate decreased during the Five-Year Plan to 0.29 per every million flight hours, down by 55 percent compared to the rate during the Ninth Five-Year Plan. The worldwide aviation accident rate is about 0.7.

This year, the CAAC adopted a series of macro controls to enhance the safety margin. In April, the International Civil Aviation Organization held a safety audit on China. The results showed that Chinese civil aviation's safety surveillance capability and safety level were on par with international standards.



Air China fleet

## Guilin Airport increases passenger volume in summer

百万旅客进出桂林空港 机场8月刷新历史纪录

Guilin Liangjiang International Airport in Guangxi handled almost a million passengers during the summer as tourists flocked to Guilin in July and August.

Passenger throughput in August reached a record 498,000. Passenger load factors hit 77 percent in July and 80.1 percent in August, higher by 2.3 percent and 7.3 percent, respectively, compared to the same period last year and the highest levels for the year.

In July and August, the airport served 8,293 flights, up by 5.6 percent, and passenger volume of 980,000, an increase of 12.1 percent on year-on-year with an average daily passenger volume of 15,800.



Guilin Liangjiang International Airport is enjoying passenger increase.

## A380 hangar framework construction completed

A380维修机库已完成主体结构施工

Ameco Beijing's A380 is halfway through its completion as structural and equipment installation is now in full swing.

The 8,770-ton roof of the A380 hangar, which measures 352.6 meters long and 114.5 meters wide, has been lifted 30 meters high after its 14-month assembly on the ground. All the huge pipes and pre-installed equipment were fixed onto the framework. A total of 45 lifting points and 138 jacks were chosen and allocated based on the structure. Real-time computer control was used to ensure that the roof could be lifted to the intended height. The lifting process took a total of 9 days.

The construction of the A380 hangar dates back to September 2006, and is scheduled for completion in March 2008. The A380 hangar is expected to be used before the Beijing Olympic Games next year.

The hangar, which can accommodate all Boeing and Airbus series aircraft including the present A380 "superjumbo" aircraft, will be the biggest aircraft maintenance hangar in Asia.

The hangar, which can house up to six wide-body and four narrow-body aircraft at one time, is expected to maintain 11,500 flights annually.

Ameco has received board approval to construct a new hangar of the same size alongside the construction of the A380 hangar.

## Beijing Airport's third runway slated to operate

首都国际机场第三条跑道十月底将进行试运行

The Beijing Capital International Airport will test and operate its third runway by the end of October. This will result in an efficient flight timetable and airspace capacity within the North China area of the Civil Aviation Administration of China.

At the North China Regional Air Traffic Management Reform Conference on August 30, a discussion was held about the main landing airports in the North China area for the Olympic Games--the Beijing Airport, Tianjin Binhai International Airport and Qinhuangdao Airport, and the alternate landing airports--the Shijiazhuang Zhengding Airport, Taiyuan Wusu Airport and Hohhot Baita Airport.

It is estimated that during the Olympic Games the peak daily flight service of Beijing Capital Airport will reach about 1,500 aircraft movements and peak hour flight movements will be about 80.

In a related development, the Air Traffic Management Bureau of the CAAC was renamed as the North China ATMB. It is responsible for the administration of air traffic control, communications, radar, navigations, weather and flight information service and other related services within the North China area which comprises Beijing, Tianjin, Hebei, Shanxi, and Inner Mongolia and occupies about 0.75 million sq. km.

## Largest helicopter arrives at China

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The largest heavy-lift helicopter in the world arrived at Harbin Taiping International Airport on September 8 and will be used for forest firefighting and installation of electric power lines.

The Mi-26TC, with eight propeller blades with a radius of 16 meters, was leased by China Flying Dragon Special Aviation Co. from Rostvertol, the helicopter's manufacturer.

Lu Jinglei, general manager of the aviation company, said the helicopter's length is 40.025 meters with rotating rotors and tail rotors. Its maximum takeoff weight is 56 tons with a load capacity of over 20 tons, nearly the same as the domestic Y-8 aircraft.

The Mi-26TC flew out from Rostov-on-Don (Russia), and arrived at Harbin after 30 hours of flight. The helicopter will be delivered after inspection.



The Mi-26TC helicopter which will be used for firefighting.

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## Taeco opens fifth hangar

第五期机库建成 厦门太古飞机维修能力再增强

Taikoo (Xiamen) Aircraft Engineering Company Limited (TAECO) opened its fifth hangar for operation on September 19.

Taeco has the capability to simultaneously maintain 10 wide-body aircraft and 4 narrow-body aircraft, making it one of the biggest aircraft maintenance bases in the world.

With an investment of US\$70 million, the fifth hangar and its ancillary facilities will meet the requirements of heavy maintenance projects for various aircraft models.

Its sixth hangar was started last September and will be finished by 2009. After its completion, Taeco can simultaneously hold maintenance service on 12 wide-body aircraft and five narrow-body aircraft.

## China's passenger volume up by 16% in August

八月份客货运均衡发展 港澳航线止跌回升

China's civil aviation industry continues to experience growth as it posted increases in total traffic, passenger, and cargo and mail in August.

Total traffic throughput reached 3.38 billion ton-km in August, higher by 17.7 percent compared to the same period last year. Passenger volume also increased by 15.9 percent to 18.21 million and cargo and mail hit 345,000 tons, higher by 15.4 percent.

Cargo and mail on international flights in August is up by 28.2 percent, 16.8 percentage points higher than domestic cargo and mail traffic as long-haul flights increased. This is attributed to the continued growth in China's import and export trades.

In August, the cargo and mail volume on China-Europe air routes increased by 82.8 percent on a year-on-year basis. Passenger volume on China-Korea routes also increased by 37.3 percent, and cargo and mail volume was higher by 28.7 percent. Passenger traffic on China-United States routes increased by 15.3 percent, but cargo and mail volume was down 3.3 percent.

The increases also pushed the passenger load factor on scheduled flights to 81.3 percent. Passenger load factors of Air China reached 84.2 percent August, while China Southern Airlines' increased to 80.7 percent.

Passenger load factors and seat occupancy rates of Shenzhen Airlines and Lucky Air were over 80 percent. Spring Airlines has the highest load factor at 96.6 percent, with the seat occupancy rate at 90.4 percent.

In August, the seat occupancy rate on scheduled flights was 69.7 percent, up 3.1 percentage points on a year-on-year basis. The load factor and seat occupancy rate of the whole aviation industry was the highest so far this year.

Daily aircraft use in August was 10.1 hours, slightly higher compared to the same period last year. Flight hours increased by 14.1 percent compared to last year.

Up until August, China had 1,078 registered civil aircraft. General aviation airlines, meanwhile, flew 10,003 hours in August.

## Shijiazhuang Aircraft to produce Little Hawk

小鹰500飞机取得生产许可 进入批量生产阶段

The Civil Aviation Administration of China awarded Shijiazhuang Aircraft Industry Corp. the license to produce the Little Hawk 500 aircraft.

Shijiazhuang Aircraft satisfied the CAAC requirements, including production facilities and a quality control system. The company applied for the license last October.

The Little Hawk 500 aircraft made its maiden flight in October 2003 and acquired its model certificate in October 2005.



A Little Hawk 500 aircraft at an exhibition.

# CAAC

## Updates



## ICAO RVSM meeting held in Beijing

国际民航组织第32次RVSM工作组会议在京召开

The 32nd Meeting of the International Civil Aviation Organization (ICAO) Reduced Vertical Separation Minimum Implementing Task Force in China was held in Beijing.

During the four-day meeting, the working group of RVSM reviewed the preparatory work for China's implementation of RVSM.

Director General Su Langen of the Air Traffic Management Bureau of the Civil Aviation Administration of China, Regional Deputy Director Rod Graf of the ICAO Asia and Pacific Office, and leaders from the State Air Traffic Control Committee and other civil aviation units attended this meeting.

In the last few years, China's civil aviation experienced a total turnover growth rate of 15 percent, behind the United States, and is expected to continue the trend.

The holding of the Beijing Olympics, the Shanghai World Expo, Guangzhou Asian Games and other major activities will place a higher demand on China's air traffic safety, capacity, efficiency and services.

Based on the pressing needs of domestic air transportation development and the latest development trends of international civil aviation, the State ATC Committee decided to fully implement RVSM in China's airspace starting on November 22.

Su says China has made the necessary preparation for the RVSM implementation, including amending and issuing the rules and regulations; signing the control transfer agreement with the adjacent control units of neighboring countries and regions; conducting a security assessment for RVSM airspace, organizing and carrying out risk management work; completing a national ATC automation system upgrade; completing RVSM airworthiness and operational approval for domestic aircrafts; conducting RVSM training for controllers and pilots; and publicizing international flight information.

He says China's civil aviation attaches great importance to the security work of the implementation of RVSM, and has actively taken a series of security measures, such as implementing safety assessment, strengthening risk management and training and formulating a transition plan to ensure the safe and smooth implementation of RVSM.

Wishing a successful conclusion of the meeting, Su expressed thanks for the support and cooperation of the relevant international organizations and participating countries.

## Gao: China to ensure smooth air traffic in the Olympics

中国跃居第二航空大国 年运送旅客达1.6亿人次

Deputy Director General Gao Hongfeng of the Civil Aviation Administration of China promised to take steps to guarantee smooth travel during the Olympic Games next year. These include strengthening infrastructure construction, expanding major airports, improving air traffic control, and forming leadership team for the Olympics.

In a related development, Gao said China has experienced rapid development in civil aviation in the last few years and has become the world's second largest aviation country next to the United States.

Last year, the Chinese aviation industry transported 160 million passengers. In the first half of the year, the growth rate was up 19.6 percent from the same period last year. There are about 1,200 flights daily with an average of 84 flights landing or taking off during peak hours.

The CAAC said China has increased its fleet to 1,067. It is estimated to grow to 1,500 by 2010 and to 3,000 by 2020.



China's aircraft fleet will increase to 1,500 by 2010 and 3,000 by 2020.

## Harbin starts radar control

提高空域利用率 哈尔滨管制区实施雷达管制

The Harbin control area started using radar control on September 15, as approved by the Air Traffic Management Bureau of the Civil Aviation Administration of China (CAAC).

After the transition from the former program control to radar control, the safety separation of aircraft within a control area will be implemented according to radar control separation, which can effectively improve airspace utilization rate, shorten flight separation between aircraft, and reduce flight delay.



## CAAC, Boeing discuss aircraft support

民航总局飞标司与波音公司首次技术交流会在京举行

The Flight Standard Department under the Civil Aviation Administration of China and Boeing Co. held the first technical meeting in Beijing to discuss aircraft support for Boeing planes being used in the country.

Also attending were representatives from the CAAC's Aircraft Worthiness Department, Center of Aviation Safety Technology and Boeing senior project managers.

Among the issues discussed were the Boeing aircraft age among domestic airlines, distribution and increase of Boeing aircraft, accumulated flight hours, service difficulty reports of airlines, SDR rate per thousand hours of Boeing planes in the last year and SDR distribution attributed to Boeing aircraft from January 2006 to June 2007.

A representative from the Flight Standard Department discussed the situation of old domestic aircraft, especially the B747-200. Boeing was asked to provide more information and technology support with regard to old aircraft. An analysis report for landing gear axle fracture is also needed for Boeing planes.

The Flight Standard Department and Boeing agreed to establish a periodic maintenance meeting every six months.



Representatives from the CAAC and Boeing during the first technical meeting.

## Aviation college welcomes 100 students

中法合办中欧航空工程师学院20日在天津开学

The Sino-European Institute of Aviation Engineering (SIAE) in Tianjin, established by the GEA France and the Civil Aviation University of China, welcomed its first 100 students on September 20.

GEA France (Group of French Aeronautics and Space Technology schools) includes ENAC (Ecole Nationale de l'Aviation Civile or the French Civil Aviation University), ENSICA (Ecole Nationale Supérieure d'Ingénieurs de Constructions Aéronautiques or the National College of Aerospace Engineering), SUPAERO (Ecole Nationale Supérieure de l'Aéronautique et de l'Espace or the National College for Aeronautics and Space) and ENSMA (Ecole Nationale Supérieure de Mécanique et d'Aérotechnique or the National College of Mechanical and Aeronautical Engineering). The four colleges belong to the French Ministry of Defense, Ministry of Transport, and Ministry of Education.

SIAE's educational system is six years, including a preparatory course of three years and an engineering course of three years.

Its courses include aircraft structure and material, aero propulsion system operating and maintenance, and electronic system and airborne equipment.

Upon graduation, the students will be awarded an engineering diploma issued by the French Engineer Academic Title Commission and the master diploma issued by CAUC.



The Sino-European Institute of Aviation Engineering (SIAE) in Tianjin.

## ICAO holds 36th Assembly

中国民航代表团出席国际民航组织第36届大会

The 36th session of the International Civil Aviation Organization (ICAO) Assembly was held in Montreal, Canada on September 18. The event was attended by 965 delegates from 168 member nations and 12 international organizations.

Vice Minister Yang Guoqing of the Civil Aviation Administration of China led the Chinese delegation to the session.

The ICAO assembly is held every three years. Participants at this meeting reelected 36 council member states, and discussed aviation safety and security, air travel, environment protection, air transport policy, and various issues about aviation economy, medicine and law.

During the meeting, the Chinese delegation participated in China's bid to be reappointed as the first category council member state.

The China delegation discussed issues including aviation environment protection within ICAO range, and revisions to the appendix of Chicago Convention, air travel, aviation health, and aviation security.

The delegation also introduced the situation of China civil aviation on air transport and implementation of ICAO standards and suggestions to the assembly.

## China, Laos, Burma agree on RVSM implementation

西南空管局签订开协调会 确保RVSM协议签订

Representatives from China, Burma and Laos met recently in Kunming, Yunnan province and agreed to the control agreements on the reduced vertical separation minimum (RVSM).

They signed the summary of minutes of the meeting in a coordination meeting sponsored by the Southwest Air Traffic Management Bureau under the Civil Aviation Administration of China (CAAC).

Each country's representative presented the current status of their air traffic management system, organization, control regions, and navigation equipment. They agreed to revise control handover agreements and RVSM operations.

Delegates from Burma and Laos also visited the operation department of the Yunnan ATMB and the aviation command center.

RVSM will be implemented on November 22 of this year.



## Apron management meeting held

民航黑龙江监管办组织  
召开机坪运行管理会议

The Heilongjiang Safety Surveillance and Management Office under the Civil Aviation Administration of China (CAAC) organized and held the apron operation management meeting. Participating were chiefs of apron operation management departments, such as the Heilongjiang Airport Group Co., Heilongjiang Branch Co. of China Southern Airlines, and Heilongjiang Branch Co. of China Aviation Oil Co.

The participants discussed the Notification on Further Enhancing Apron Management issued by CAAC and the Notification on Issuing Apron Operation Management Checklist issued by the CAAC's Northeast Regional Administration.

All apron operation management departments were asked to implement the notices. The Heilongjiang Airport Group was asked to implement the apron management responsibility, organize its apron operation management work, inspect work based on the checklist, and finish it within the deadline.

The Heilongjiang Safety Surveillance and Management Office will supervise and inspect airports to ensure the complete implementation of the notices.

## NDRC approves Shaertu airport construction

黑龙江省大庆萨尔图机场  
获得国家发改委批准

The National Development and Reform Commission approved the feasibility report for the Shaertu airport in Daqing, Heilongjiang province on September 7.

The project targets 2015 as the completion year. The airport was designed according to the requirement of passenger throughput of 0.96 million and cargo and mail throughput of 9,600 tons per year.

The airport will have a 4C grade flight area, a runway 2,600 meters long and 45 meters wide, two connecting taxiways of 395.5 meters long and 23 meters wide each, a terminal building with an area of 9,700 sq.m., five apron aircraft positions, and a 1,000-sq.m. air traffic management operation building. It will also have a production and support building with an area of 3,915 m., and public service facilities such as fuel, communication, power supply, water supply, heating, firefighting station, entrance road, and park. The total investment for the airport is RMB 39.62 million.

## Hangzhou ATM passes CAAC audit

杭州空管中心首批通过民航总局安全审计

The Hangzhou Air Traffic Management Center has passed the safety audit of the Civil Aviation Administration of China.

On January 1, 1957, the CAAC opened the Shanghai-Hangzhou-Nanchang-Guangzhou air route. Hangzhou Air Traffic Management Center has served 580,000 movements since it was established in January 2002. The center registered average aircraft movements of 340,000, or an average 22.6 percent increase annually.

Last year, the center served 98,000 aircraft movements consisting of landings and takeoffs, twice as many as when the center was established.

The center ranks third among East China area airports and ninth among China airports. In the last five years, it has fulfilled safe operations.

The CAAC audit group inspected documents and records as well as audio and video files. The audit included an

inspection of 1,808 items, of which 1,441 items conformed with standards and five did not conform with a conform rate of 99.65 percent.

Based on the evaluation of organization and management, regulations and systems, operation management, resources distribution, information management, emergency handling, and personnel training, the initial score of the center was 96.6 points.



CAAC officials announce the results of the safety audit of the Hangzhou Air Traffic Management Center.

## CAAC handled 177 SDRs in August

2007年8月份SDR情况概述

The Flight Department of the Civil Aviation Administration of China collected, analyzed and handled 177 aircraft service difficulty reports in August that were sent by airlines.

Of these, 125 SDRs were related to aircraft system/structure malfunction, and 52 to other reasons such as bird strike, ground collision, weather or other incidents.

## Heilongjiang ATMB now uses radar control

黑龙江空管分局正式实施区域和塔台雷达管制

Since September 15, the tower control of Heilongjiang Air Traffic Management Bureau and the Harbin control area implemented radar control.

The implementation of radar control will enhance flight safety, improve air traffic control services and effectively utilize Harbin airspace and expedite the coordinated development of Longjiang air traffic management.

## China to help African nations on aviation safety

中国将向非洲航空业提供资金和人员培训支持

Vice Minister Yang Guoqing of the Civil Aviation Administration of China announced in Montreal, Canada, on September 17 that it will provide fund and personnel training support for African countries to improve their aviation safety level.

Yang attended the Comprehensive Regional Implementation Plan for Aviation Safety in Africa at the International Civil Aviation Organization meeting in Montreal. He said that from 2008 to 2010, China will donate US\$400,000 to help African countries improve their safety levels.

China will invite about 100 civil aviation officials and experts from Africa each year to participate in human resources development training in China.

At the meeting, the United States, Korea, and India also promised to promote and enhance Africa's aviation safety. Representatives at the meeting submitted the plan to the 36th Conference of ICAO held on September 18 to 28 for approval.

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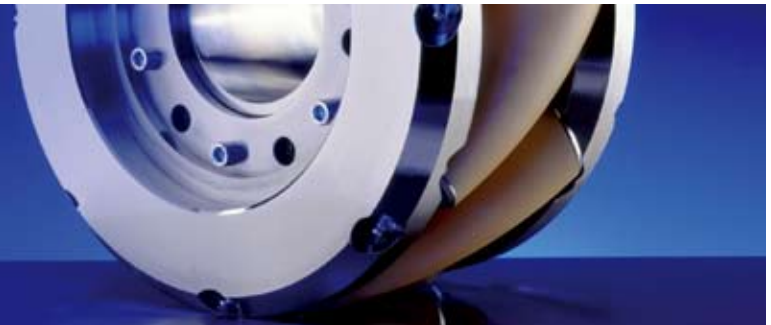
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# Commercial Aviation News



## China Southern orders 55 737N-G

南航订购55架波音737客机  
总价值约38亿美元

China Southern Airlines has ordered 55 additional Next-Generation 737-700s and 737-800s, valued at US\$3.8 billion.

The 55 will supplement China Southern's 129 737s already in use and 14 that have yet to be delivered from previous orders. The additional planes will lower the average age of China Southern aircraft.

"We look forward to placing our new 737s into our expanding network," said Si Xian Min, China Southern Airlines president.

"China's aviation future is very strong and we believe the Boeing 737 family will continue to play a pivotal role in the development of its domestic networks," said Rob Laird, vice president of Sales/China, Boeing Commercial Airplanes.

During the next 20 years, Boeing estimates that China will be the world's second largest market for commercial jetliners, trailing only the United States. Domestic passenger traffic growth in China is expected to increase an average of 9 percent annually during the 20-year period.



China Southern's total orders are valued at US\$3.8 billion.

## Shanghai Airlines to buy 5 A321

上航将购买5架A321飞机 目录价格约3.7亿元

Shanghai Airlines announced that it will purchase five A321 aircraft from Airbus to beef up its fleet, and sell four of its B757 to Aircastle and then lease them back. This is part of the airline's plan to improve service and cut costs.

The five Airbus planes will cost Shanghai Airlines about US\$370 million. Delivery will be between 2011 and 2012.

The company will sell four B757 to Aircastle, an aircraft leasing company, for US\$66 million and then lease them back.

China is expected to buy more than 3,000 new jets in the next two decades as air traffic continues to grow based on industry forecasts.

On the other hand, Boeing Co. identified Xiamen Airlines as the airline that ordered 25 single-aisle 737 jets with the option to purchase an additional 10. The order was worth US\$1.9 billion, according to Boeing.



Shanghai Airlines will increase its fleet with the purchase of five A321 aircraft.

## Ameco, Cathay Pacific sign service accord

Ameco获得A320、A321起落架大修最大订单

On September 3, the Aircraft Maintenance and Engineering Corp. (Ameco Beijing) and Cathay Pacific signed the general terms of agreement (GTA) for A320 and A321 aircraft landing gear exchange and overhaul service during the Asian Aerospace International Expo and Congress held in Hong Kong.

According to the agreement, from 2007 to 2015 Ameco Beijing will provide landing gear exchange and overhaul service for Cathay Pacific's A320/A321 fleet. This is the first time that Ameco will have an agreement with Cathay Pacific on landing gear service and the first time that Ameco has expanded its overhaul service outside Mainland China.

Together with Lufthansa Technik and Hawker Pacific, Ameco has established the landing gear maintenance association, which expands overhaul and exchange capability for various landing gears and provides better and quicker landing gear service for global users.

General Manager He Zhenxian of the Engineering Department of Cathay Pacific, and Directors Seeger and Zheng Yan of Sales and Purchase Department of Ameco signed the agreement.

Also attending were Vice President He Li of Air China, Vice General Manager Zhong Dechao of Air China Engineering and Technical Branch Co., purchasing manager Chen Ruifang, and senior director Zhu Xiao of Ameco Marketing Department.

## Code-sharing starts between ANA, Shanghai Airlines and Air China

国航、上航及全日空将在沪日航线实行代码共享

All Nippon Airways started its code-sharing agreement with Shanghai Airlines and Air China on flights operated by ANA and Shanghai Airlines between Tokyo's Haneda Airport and Shanghai's Hongqiao Airport on September 29.

Until now, Haneda and Hongqiao have almost exclusively served their respective domestic markets. However, in a move to commemorate the 35th anniversary of the normalization of diplomatic ties between China and Japan, they will be opened for

international flights on the very date of the said anniversary.

Both Haneda and Hongqiao airports are close to, and can be accessed speedily and easily from, their respective city centers, making journeys between Tokyo and Shanghai shorter and more convenient.

As the flights will carry the respective flight codes of each airline - NH for ANA, FM for Shanghai Airlines and CA for Air China - customers will be given a greater choice of flights for the airline they wish

to fly. As all three airlines enjoy reciprocal mileage benefits, customers may accrue and redeem mileage on any of the flights.

Shanghai Airlines and Air China will also join ANA as fellow members of Star Alliance at the end of this year.

With this agreement in place, the three airlines will offer among them 104 weekly flights between Japan and Shanghai, including Shanghai's Pudong Airport. In total, they will offer 281 flights per week between Japan and China.

## Chinese airlines to add 12 new routes

民航总局初步分配  
未来两年欧美航线

Flag carrier Air China will add 12 new routes to Europe and the United States starting in 2008 and 2009 as it expands its international flight network.

On September 10, the Civil Aviation Administration of China issued the initial distribution plan for long-haul flights to Europe and the US from 2008 to 2009.



Besides Air China, other Chinese airlines that will add new routes are China Eastern Airlines, China Southern Airlines, Hainan Airlines, and Shanghai Airlines.

CAAC announced that Air China will open three new routes in 2008: Beijing-Berlin, Beijing-Istanbul, and Beijing-Warsaw. In 2009, it will open nine air routes: Beijing-Toronto, Beijing-Manchester, Beijing-Zurich, Beijing-Dusseldorf, Beijing-Vienna, Shanghai-Roma, Beijing-Milan. Each air route will have seven flights a week.

Air China also plans to add flights in 2008 on the routes Beijing-Los Angeles, Beijing-Moscow, Shanghai-Paris, Beijing-Paris, Shanghai-Milan, and Beijing-San Francisco. In 2009, it will add flights on the following routes: Beijing-Vancouver, Beijing-New York, and Beijing-Frankfurt.

By contrast, China Southern Airlines will open two new air routes in 2008: Beijing-Newark and Guangzhou-Moscow, each with seven flights a week. China Eastern Airlines will open an air route to Shanghai-Los Angeles with two flights every week.

Hainan Airlines plans to open two air routes to Beijing-Hamburg and Shanghai-Zurich, each with four flights every week.

Shanghai Airlines will open three air routes: Shanghai-Vienna, Shanghai-Hamburg, and Shanghai-Zurich.

In 2009, China Southern will open the Beijing-Amsterdam air route with seven flights every week. Also, China Southern, China Eastern, Hainan Airlines and Shanghai Airlines will add more flights to their current international air routes.

## New flights to open between Hongqiao, Gimpo Airports

上海和首尔定期国际客运包机10月28日开通

Shanghai Hongqiao Airport and Gimpo International Airport of Seoul, South Korea will open passenger charter flights between them, starting on October 28.

The opening of new flights marks the 15th anniversary of diplomatic relations between China and South Korea and highlights the bilateral cooperation between the two countries. The event is a result of the visit of Chinese Premier Wen Jiabao to Korea in April of this year.

At the onset, China and South Korea will have two airlines operating four international flights between Hongqiao and Gimpo.

## Gansu Jinchang Airport to cost RMB 480-M

甘肃金昌民用机场选址确定 总投资达4.8亿元

Chinese aviation authorities approved the location report for the Jinchang civil airport, which will be constructed at a cost of RMB 480 million. Experts from the Civil Aviation Administration of China, Lanzhou Military District Air Force Headquarters, Northwest Regional Administration of CAAC, National Development and Reform Commission of Gansu Province met in Jinchang, Gansu Province, and evaluated the report.

Jinchang Airport will be constructed according to grade 4C standards. After inspection by the Northwest Branch Company of China Airport Construction Corp. and Northwest Air Traffic Management Bureau of CAAC, three location sites were recommended: Bafendi, Zhaojiagou Village, and Jiugou Village in Shuangwan Town, Jinchuan District.

## Chongqing Airport breaks 1-million passenger mark

重庆江北机场八月旅客吞吐量首次破百万大关

The passenger throughput at Chongqing Jiangbei International Airport broke the one-million mark in August, with an average daily turnover of 32,000. The highest daily volume came on August 12 with 35,000 passengers. The passenger throughput is up 70 percent on a year-on-year basis.

From January to September 1, Chongqing Airport handled 69,116 aircraft movements, 87,600 tons of cargo



Passengers at Chongqing Airport queue at the check-in counters.

and mail and 6.83 million passengers, up by 20.78 percent, 19.06 percent and 27.71 percent, respectively. This year the passenger throughput is expected to break the 10-million mark.

Based on the data, Chongqing Airport had a passenger volume of 1,005,647 passengers in August, higher by 27.69 percent compared to the same period last year. Aircraft movements totaled 9,480, while cargo and mail volume increased by 19.02 percent to 10,708.8 tons.

The increase in volume was attributed to the development of international air routes, careful management of air route network and marketing.

The number of airlines operating at Chongqing Airport has increased to 18, and the average passenger load factor is 79.8 percent.

## Qingdao Airport reports increase in passenger volume

青岛流亭国际机场八月各项生产再创历史新高

Qingdao Liuting International Airport increased its passenger volume in August to 892,300 as tourists flocked to the Qingdao International Beer Festival and International Sailing Tournament. The passenger volume was 19 percent higher

compared to the same period last year.

Aircraft movements reached 8,604, up by 14.65 percent on year-on-year. From January to August, the airport handled 5.22 million passengers, which is equal to the total passenger volume in 2005.



## Shenzhen Airport acquires Libo Airport

深圳机场全资收购黔南荔波机场

Shenzhen Airport Co. has signed an agreement with the Qiannan Autonomous Prefecture in Guizhou province for the transfer of shares of Libo Airport.

Shenzhen Airport will purchase a 100-percent stake in Libo Airport, located in Libo county, and will take over all its assets and liabilities. After the transfer, Libo Airport will become a whole subsidiary of Shenzhen Airport.

The company will expand the airport's apron and terminal building, establish a four-star hotel, provide services including tourism, logistics, tickets and hotel and open Libo Airport's international routes.

Libo Airport, which kicked off construction in 2003 with a total investment of RMB 396.36 million, is a regional airport for tourism, and is capable of serving aircraft like the Boeing 737. Its trial flight was held this July, and its maiden flight started last September 29.

The buy-in at Libo Airport comes after Shenzhen Airport bought a 21-percent stake in Chengdu Shuangliu International Airport.

Shenzhen Airport is becoming an airport management group with its strategy of buying stakes in different airports in China.

## Changdu Bangda's expansion project approved

西藏昌都邦达机场改扩建项目获得发改委批准

China's National Development and Reform Commission approved the proposal for the retrofit and expansion project of Tibet's Changdu Bangda Airport on August 8.

The target completion year is 2015. The new airport is designed to handle 180,000 passengers, 540 tons of cargo and mail, and 2,392 aircraft movements per year.

Major construction includes repairing the runway and apron surface, constructing a new apron of about 11,900 sq. m., and building a new terminal with an area of 4,000 sq.m. The current terminal building will be used as a freight warehouse. The control tower will be moved and the air traffic management building and other service facilities will be retrofitted.

Total investment for the project is RMB 270 million, which is being funded by the NDRC and the Civil Aviation Administration of China (CAAC).



The new Changdu Bangda airport can handle 180,000 passengers per year.

## Xinjiang offers discounts to airlines

航空公司使用新疆支线机场起降费将享受优惠

Xinjiang has given a 20-to-40 percent discount on landing fees to airlines that are flying to regional airports to encourage more airlines to fly to the region.

A 20-percent discount on the landing fee will be given to domestic airlines using B737 or bigger aircraft in the summer and autumn that will fly to Hetian Airport, Aletai Airport, Yining Airport, Nalati Airport, Tacheng Airport and Kurle Airport. In the winter and spring, a 40-percent discount will be given.

Airlines using ATR72 or other aircraft below this type that will fly to Tacheng Airport, Kuche Airport and Qiemo Airport will get a 30-percent discount.

Currently, Xinjiang regional aviation is mainly operated by China Southern Airlines and Hainan Airlines. By the end of 2010, it is estimated that the number of air routes within Xinjiang will reach 36 and annual passenger volume at all Xinjiang airports will reach 13.28 million.

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## Kunming Airport's passenger traffic up by 17.6%

昆明机场口岸上半年  
出入境旅客突破50万人次

Kunming Airport handled 507,000 passengers in the first half of the year, higher by 17.6 percent compared to the same period last year. The airport also registered aircraft movements totaling 4,502, up by 11.1 percent, according to the Yunnan Provincial Port Office.

It is estimated that Kunming Airport's passenger volume will break the one-million mark by the end of the year.



Kunming Airport's passenger traffic increased for the first half of the year.

## Air China increases passenger traffic in August

中国国航八月客运吞吐量较上年同期增长6.2%

Air China announced that its August passenger volume reached 3.32 million, up by 6.2 percent on a year-on-year comparison. Its cargo volume for the month also increased by 10 percent to 78,226.8 tons.

The airline's passenger volume on domestic flights increased by 6.2 percent and 8 percent on international flights.

However, passenger throughput on flights from Mainland China to Hong Kong and Macau decreased by 4 percent.

From January to August this year, Air China's passenger throughput reached 23.2 million, up 12 percent on a year-on-year basis. During the same period, cargo throughput reached 608,261 tons from 525,210.5 tons last year, or higher by 16 percent.

The passenger load factor in August reached 84.2 percent, up 3.2 percentage points compared to the same period last year.

## United Eagle increases capital

鹰联增资达2亿元 十月开通成都——广州航线

United Eagle Airlines announced on September 18 that it increased capital and expanded shares in August. The registered capital was increased to RMB 200 million.

The airline recently opened the Kunming-Wuhan-Nanjing air route. It also plans to open the Chengdu-Guangzhou air route this October. As the first private airline approved to be established in China, United Eagle Airlines has been operating for two years.

The airline has four aircraft in its fleet and almost 30 air routes including flights from Chengdu to Beijing, Hangzhou, and Nanjing.

In February, United Eagle and Sichuan Airlines entered into a code-sharing agreement.



United Eagle Airlines' capital is now RMB200 million.

## Embraer delivers 1000th ERJ 145 jet to China

巴西航空在中国交付第1000架 ERJ145

Harbin Embraer Aircraft Industry Co. (HEAI) delivered the 1000th aircraft of the ERJ145 family to Grand China Express in Harbin City, China on October 1, marking a milestone in a little over a decade.

Grand China Express is a wholly owned airline by Hainan Airlines Group, which placed an order for 50 ERJ145s and 50 Embraer 190s in August last year.

HEAI is a joint venture between Embraer and China Aviation Industry Corp. II (AVIC II). Under an agreement, 50 ERJ 145s will be made by HEAI and the 50 Embraer 190 will be manufactured by Embraer in Brazil.

"I am delighted to witness the delivery of the 1000th jet of the ERJ 145 family to our valuable Chinese customer, the HNA Group. The aircraft is a proven product and has been flying with all the main world-class regional airline operators around the globe, since 1996," said Frederico Fleury Curado, Embraer president and CEO.

"ERJ 145 project is a significant measure of AVIC II to fulfill the strategy for development of regional aircraft and regional aviation instituted by the Central Government and the State Department," said Hongbiao Zhang, general manager of AVIC II.

"It is the first time that China collaborates by a pattern of joint venture with a leading foreign civil aircraft manufacturer to assemble aircraft. This project is a major outcome of the collaboration between China and Brazil in high tech industry, and a successful model of 'South-South Cooperation'.

## Aircraft movements up in July

中国民航总局公布七月主要运输生产指标统计

Chinese airlines registered 146,051 aircraft movements in July, higher by 14,593 compared to June. The average on-time performance is 81.58 percent, up 3.49 percentage points from last year. The on-time performance of scheduled flights is 81.74 percent, and 77.44 percent for charter flights.

According to the data, there were 11,646 abnormal flights attributed to airlines, including airline plan, engineering mechanic, transport service and air crew, comprising 43.3 percent of the total abnormal flights.

There were 6,749 abnormal flights due to weather (25.1 percent of abnormal flights); 5,517 movements by air traffic management reasons, including flow control and flight service (20.5 percent); 431 movements attributed to passengers (1.6 percent); and 1,588 movements for other reasons (5.9 percent)

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CAAC Updates



On-time performance of Chinese airlines improved to 81.58 percent.



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